



## **SERIES 41 GUIDE SPECIFICATION**

### **FIBERGLASS BACKWARD CURVED CENTRIFUGAL FAN**

The belt drive Fiberglass Backward Curved Centrifugal Fan shall be manufactured by Hartzell Air Movement, Series 41, Type FA, ARRG. 1, 4, 9, 9M, or 10, in Classes I, II, III. Standard sizes are 12" through 60". Rotation as determined by the drive side of the fan, shall be clockwise or counter-clockwise. Fan housing, for sizes 12 through 36, shall be field rotatable and the discharge shall be any of the eight AMCA standard positions. Sizes 40 through 60 shall be a fixed construction for the rotation and discharge specified. The fan shall be completely assembled, packaged and ready to install.

The resin used on the solid fiberglass type FA wheel shall be Dow Derakane 510-A vinylester. Blades shall be backward curved to provide non-loading, highly efficient operation. The wheel shall have a totally encapsulated aluminum core insert for secure attachment to the shaft. The wheel shall be one-piece, resin transfer molded, without hand lay-up or assembly of components. The fan is suitable for temperatures up to 250° F.

Fan housing shall be constructed of Ashland Hetron 693 polyester resin and glass fiber with 3% antimony trioxide added to achieve Class I flame spread below 25. All fiberglass surfaces shall be protected with a minimum 10 mil thickness of chemical, flame and ultraviolet resistant resin. The inlet cone shall be solid fiberglass. The entire housing shall have a finish coat of resin to provide superior protection and smooth airflow. All airstream hardware shall be 304 stainless steel. The fan drive base shall be epoxy coated steel.

The fan shaft shall be ground and polished carbon steel with an FRP sleeve in the airstream. Bearings shall be heavy-duty, self-aligning, with extended lube tubes for continuous service, with a minimum of 50,000 hours L<sub>10</sub> life. A neoprene shaft seal shall be located where the shaft enters the housing with a neoprene shaft slinger between the seal and wheel. V-belt drives shall be sized for continuous service.

The fan assembly shall be dynamically balanced at the Hartzell factory prior to shipping. Fans shall be balanced in accordance with AMCA Standard 204-96, fan application category BV-3 (comparable to Grade G6.3). Fans shall be manufactured in accordance with Hartzell's standard quality assurance procedures. Fan performance shall be based on tests conducted in Hartzell's AMCA accredited test laboratory and in accordance with the latest revision of AMCA Standard 210 for air performance and AMCA Standard 300 for sound. Fans shall be licensed to bear the AMCA Certified Seal for Sound and Air Performance.

### **ACCESSORIES:**

- Weather Cover - Combines guarding of motor and drive as well as providing protection from the weather.
- Belt Guard - Epoxy coated steel, covers belts and motor sheave.
- Safety Guards - Fit on inlet or outlet of fan. Made of epoxy coated steel.
- Vibration Isolators - For horizontal floor mount. Available in rubber-in-shear or spring type.
- Drain - CPVC bulhead fitting assembled in housing, 1" female fitting.

- Inlet Dampers - Used to control volume. Standard construction is available through 7" and 3000 FPM, and is epoxy coated steel.
- Surfacing Veil - Either Nexus Veil (standard) or C Glass Veil applied to the airstream fan parts, with an additional coat of resin.
- Electrical Grounding - Air stream surfaces are coated with a carbon rich coating with grounding straps to the motor frame. User must properly ground the equipment at the installation.
- Motors - OEDP standard. TEFC and other special motors are available upon request.
- Access Door - Raised, bolted door held in place with stainless steel bolts and gasketed.
- Inspection Door - Small opening for visual inspection of wheel. Gasketed and held in place with stainless steel bolts.
- Flanged Inlet - Solid fiberglass inlet flange, available drilled or undrilled.
- Special Hardware - 316 stainless steel or Monel for special chemical environments.
- Outlet Dampers - Epoxy coated steel or stainless steel, either parallel or opposed blade type. Solid fiberglass backdraft dampers are also available.
- Arrg. 1 Sub-Base - Epoxy coated structural base to provide motor and fan support.
- 9M Sub-Base - Motor sub-base to accommodate larger motor in horizontal position.
- Abrasion/Erosion Resistant Coating (HartKoate) - Particularly useful when water mist and/or abrasive particles exist in the air stream.
- Split Housing - Allows removal of the wheel and shaft without distributing the fan inlet.
- Conformance to ASTM D4167-97 requirements.